Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Currently Amended) A method for speech recognition comprising:

a feature-amount extracting step for extracting a feature amount based on a frame of an input utterance;

a storing step for determining whether a current processing frame is within or at an̶the end of a candidate word previously registered, and storing the candidate word on the basis of a first hypothesis-storage determining criterion when within the̶a word and on the basis of a second hypothesis-storage determining criterion when at the̶a word end;

a developing step for developing a hypothesis, the hypothesis being at least one hypothetic candidate word, the hypothetic candidate word selected from candidate words previously registered, by extending utterance segments expressing the hypothetic candidate word when a stored candidate word is within the̶a word and by joining a new hypothetic candidate word to follow according to an inter-word connection rule when at the̶a word end;

an operating step of computing, in the frame a similarity measure o̶f between a the̶frame feature amount extracted from the input utterance and a frame-based feature amount of an acoustic model of the developed hypothesis, and calculating a new recognition score from a) the similarity measure and b) a recognition score of the developed hypothesis of up to an immediately preceding frame calculated from the similarity measure; and

a step of repeating the storing step, the developing step and the operating step until the processing frame becomes a last frame of the input utterance, and outputting, as a recognition result approximate to the input utterance, at least one

of hypotheses in the order of higher recognition score due to processing the last frame,

wherein the first hypothesis-storage determining criterion selects candidate words within a predetermined threshold from a maximum value of the recognition score, and

the second hypothesis-storage determining criterion selects a subset of candidate words from among candidate words selected according to the first hypothesis-storage determining criterion, the subset of candidate words selected according to a predetermined number of upper ranking recognition scores.

2.   (Cancelled).

3.   (Currently Amended)   An apparatus for speech recognition comprising:

a feature-amount extracting section for extracting a feature amount based on a frame of an input utterance;

a search control section for controlling to develop a hypothesis, the hypothesis being at least one hypothetic candidate word, the hypothetic candidate word selected from candidate words previously registered, by extending based on utterance segments to express a the hypothetic candidate word when the hypothesis is within thea word and by joining a new hypothetic candidate word to follow according to an inter-word connection rule previously determined when at thea word end;

a similarity computing section for computing, in a frame, a similarity measure of between a frame feature amount extracted from the input utterance and thea frame feature amount of an acoustic model of the developed hypothesis;

a search operating section for operating a recognition score from the similarity measure and recognition score of the developed hypothesis of up to an immediately preceding frame;

a hypothesis determining section for determining whether a current processing frame is within ~~the~~a word or at ~~the~~a word end of the ~~hypothesis~~ hypothetic candidate word and using the recognition score to select ~~the~~a candidate word according to a first determining criterion when within ~~the~~a word and to select ~~the~~a candidate word according to a second determining criterion when at ~~the~~a word end;

a hypothesis storing device for storing ~~the~~a hypothesis determined to be stored;

a word hypothesis registering device for registering as a new hypothesis the hypothesis and the recognition score; and

a recognition result output section for continuing the frame-based process to a last frame of the input utterance and outputting at least one hypothesis in the order of higher recognition score,

wherein the first determining criterion selects candidate words within a predetermined threshold from a maximum value of the recognition score, and

the second hypothesis-storage determining criterion selects a subset of candidate words from among candidate words selected according to the first hypothesis-storage determining criterion, the subset of candidate words selected according to a predetermined number of upper ranking recognition scores.

4.   (Cancelled).

5.   (Currently Amended) A program for executing:

a feature-amount extracting step for extracting a feature amount based on a frame of an input utterance;

a storing step for determining whether a current processing frame is within or at ~~the~~an end of a candidate word previously registered, and storing the candidate word on the basis of a first hypothesis-storage determining criterion when within

the~~a~~ word and on the basis of a second hypothesis-storage determining criterion when at the~~a~~ word end;

a developing step for developing a hypothesis, the hypothesis being at least one hypothetic candidate word, the hypothetic candidate word selected from candidate words previously registered, by extending utterance segments expressing the hypothetic candidate word when a stored candidate word is within the~~a~~ word and by joining a new hypothetic candidate word to follow according to an inter-word connection rule when at the~~a~~ word end;

an operating step of computing, in a frame, a similarity measure ~~of~~ between ~~the~~ a frame feature amount extracted from the input utterance and a frame-based feature amount of an acoustic model of the developed hypothesis, and calculating a new recognition score from a) the similarity measure and b) a recognition score of the developed hypothesis of up to an immediately preceding frame calculated from the similarity measure; and

a step of repeating the storing step, the developing step and the operating step until the processing frame becomes a last frame of the input utterance, and outputting, as a recognition result approximate to the input utterance, at least one of hypotheses in the order of higher recognition score due to processing the last frame,

wherein the first hypothesis-storage determining criterion selects candidate words within a predetermined threshold from a maximum value of the recognition score, and

the second hypothesis-storage determining criterion selects a subset of candidate words from among candidate words selected according to the first hypothesis-storage determining criterion, the subset of candidate words selected according to a predetermined number of upper ranking recognition scores.

6.   (Cancelled).

7.   (Currently Amended)   A computer-readable recording medium recording a program for executing:

a feature-amount extracting step for extracting a feature amount based on a frame of an input utterance;

a storing step for determining whether a current processing frame is within or at the~~an~~ end of a candidate word previously registered, and storing the candidate word on the basis of a first hypothesis-storage determining criterion when within the~~a~~ word and on the basis of a second hypothesis-storage determining criterion when at the~~a~~ word end;

a developing step for developing a hypothesis, the hypothesis being at least one hypothetic candidate word, the hypothetic candidate word selected from candidate words previously registered, by extending utterance segments expressing the hypothetic candidate word when a stored candidate word is within the~~a~~ word and by joining a new hypothetic candidate word to follow according to an inter-word connection rule when at the~~a~~ word end;

an operating step of computing, in a frame, a similarity measure ~~of~~between ~~the~~a frame feature amount extracted from the input utterance and a frame-based feature amount of an acoustic model of the developed hypothesis, and calculating a new recognition score from a) the similarity measure and b) a recognition score of the developed hypothesis of up to an immediately preceding frame calculated from the similarity measure; and

a step of repeating the storing step, the developing step and the operating step until the processing frame becomes a last frame of the input utterance, and outputting, as a recognition result approximate to the input utterance, at least one of hypotheses in the order of higher recognition score due to processing the last frame,

wherein the first hypothesis-storage determining criterion selects candidate words within a predetermined threshold from a maximum value of the recognition score, and

the second hypothesis-storage determining criterion selects a subset of candidate words from among candidate words selected according to the first hypothesis-storage determining criterion, the subset of candidate words selected according to a predetermined number of upper ranking recognition scores.

8. (Cancelled).